REMARKS

Claims 1, 4-11, 14-21, 24-31 and 33 are pending and stand rejected. Claims 1, 11, 21 and 31 are independent claims. The applicant amended claims 1, 11, 21, and 31. Support for these amendments can be found in the specification at least at page 2, lines 3-5 and page 8, lines 24-27. The applicant respectfully requests reconsideration in view of the foregoing amendments and following remarks.

Section 101 Rejections

Claims 1 and 4-10 stand rejected under 35 U.S.C. Section 101 because the claimed invention is directed to non-statutory subject matter. The Examiner contends that the claimed operating system is not tangibly embodied in a manner as to be executable. The applicant amended claim 1, which now recites an operating system that is tangibly stored on machine readable medium. The applicant respectfully submits that claim 1 and claims 4-10 now recite statutory subject matter.

Claims 21 and 24-30 stand similarly rejected under 35 U.S.C. Section 101. The applicant amended claim 21, which now recites a computer system that includes a processor. The applicant respectfully submits that claim 11 and claims 24-30 now recite statutory subject matter.

Section 103 Rejections

Claims 1, 4-5, 9-11, 14-15, 19-21, 24-25, and 29-33 stand rejected under 35 U.S.C. Section 103(a) as being unpatentable over U.S. Patent No. 5,995,745 to Yodaiken ("Yodaiken") in view of U.S. Patent No. 6,167,425 to Beckhoff ("Beckhoff"). Claims 6-8, 16-18, 26-28 stand rejected under 35 U.S.C. Section 103(a) as being unpatentable over Yodaiken in view of Beckhoff and further in view of U.S. Patent No. 5,742,825 to Mathur et al. ("Mathur").

The applicant amended claim 1 to recite in the claim what it means for an operating system to include "a non-preemptive microkernel executing two or more processes in accordance with a non-preemptive scheduling scheme." The claim now makes clear that "each process executed by the non-preemptive microkernel relinquishes a processor for a higher priority

process to execute <u>only</u> when the process blocks or explicitly requests to be preempted."
(Emphasis added.)

The applicant respectfully submits that Yodaiken and Beckhoff, assuming that there is motivation for their combination, teach away from the claimed non-preemptive microkernel. Yodaiken discloses a real-time operating system, called an RT-executive, that runs a general purpose operating system. *See* col. 2, lines 40-44. However, the RT-executive is preemptive. Yodaiken explains that a simple priority-based <u>preemptive</u> scheduler is used in RT-Linux, which is an implementation of the RT-executive. *See* col. 4, lines 49-54. Tasks "are <u>preempted</u> by a higher priority task when its time to execute comes." *Id.* (Emphasis added.) Thus, contrary to the Examiner's reading, Yodaiken's real-time operating system is preemptive. *See also* col. 2, lines 13-15.

Beckhoff discloses a real time control program implemented in a non-real time operating system. *See* col. 2, lines 38-46. Implemented by interrupt calls, run times on a processor are allocated to the real time control program and to the non-real time operating system. *See* col. 2, lines 46-53. It is guaranteed that time critical tasks of the operating system are processed without interruption. *See* col. 3, lines 38-43. However, there is no such guarantee for operating system tasks that are not time critical, and operating system tasks that are not time critical can be interrupted. Thus, Beckhoff's operating system is preemptive.

In contrast, the applicant's claimed microkernel is <u>non-preemptive</u>, and a task being processed by the non-preemptive microkernel would not be preempted. The applicant respectfully submits that one of ordinary skill in the art, by looking at Yodaiken and Beckhoff's preemptive real time operating system, would be lead away from the applicant's non-preemptive microkernel.

The Examiner recognizes that Mathur, the other of the three applied references, does not disclose or suggest the above-discussed limitations of claim 1.

For at least the reasons discussed above, the applicant respectfully submits that claim 1 and claims depending from claim 1 are in condition for allowance.

The applicant amended claim 11 to correspond to claim 1 as amended. For reasons discussed above, the applicant respectfully submits that claim 11 and claims depending from claim 11 are in condition for allowance.

The applicant amended claim 21 to add limitations corresponding to those added to claim 1. For reasons discussed above, the applicant respectfully submits that claim 21 and claims depending from claim 21 are in condition for allowance.

The applicant amended claim 31 to add limitations corresponding to those added to claim 1. For reasons discussed above, the applicant respectfully submits that claim 31 and claim 33, which depends from claim 31, are in condition for allowance.

<u>Substance of the Interview</u>

The applicant thanks the Examiners for the courtesy of an interview conducted on July 20, 2005. The participants were Examiner Syed and the applicant's representatives, Hans R. Troesch and Tim H. Pham. In the interview, the participants discussed differences between a preemptive scheduling scheme and a non-preemptive scheduling scheme, the non-preemptive microkernel recited by claim 1, and the references Yodaiken and Beckhoff.

The applicant respectfully requests that all pending claims be allowed. Please apply $120 for a one-month extension of time and any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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